

Natural Sciences of Philadelphia. Type locality, northwest corner of Peebles ranch, two miles up Elk Creek from Newcastle, Colorado, where it was found in great abundance by Mr. Albert Dakan, in April, 1908. Mr. Dakan was also the collector of the types of *hendersoni*. I found *dakani* nine miles east of Meeker, Colorado, in 1909, where it was associated with *O. cooperi* (W. G. B.). In color the specimens from both localities average a trifle lighter than typical *hendersoni*, being almost white, with a slight creamy tinge. A large series from the well-known colony on the south side of the Grand River at Glenwood Springs, Colorado, is on an average very much darker and less robust, but otherwise so closely agrees with the Newcastle specimens that I have not thought a separate name advisable. The forms of this species agree in the almost total absence of spiral color lines on the last whorl.

It may not be out of place to say here that Mr. Dakan has recently found at Lyons, Colorado, typical specimens of *O. haydeni betheli* Pils. & Ckll. This carries its range across to the eastern base of the Front Range, which constitutes the Continental Divide, and 100 miles to the northeast of the type locality.

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## TWO NEW ACHATINELLIDÆ OF OAHU.

BY H. A. PILSBRY.

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In March last I went in company with Dr. C. Montague Cooke from Honolulu to Hilo, Hawaii, chiefly for the purpose of studying Mr. Thaanum's superb collection of Hawaiian shells. One of his recent acquisitions was a sinistral *Amastra*, from Waiahole, which is certainly new; and at his suggestion I name it for the companion of my Hawaiian journey. *Amastra montagui* n. sp. is sinistral, imperforate, oblong-conic, rather thin, chestnut colored, with a denuded ecru-olive patch in front of the aperture. The surface has a somewhat silky gleam, due to the rather fine wrinkles along lines of growth. The apex is obtuse, embryonic whorls convex, nearly smooth; outlines of the spire noticeably convex. Suture well impressed, the whorls a little swollen below it. The aperture is not very oblique, slate-violet within; peristome black at the edge, strengthened by a low white callus within; columella with reflexed and adnate edge, bearing a rather strong, white, subtriangular lamella. Length 13, diam. 7.8, length

of aperture 6 mm.;  $5\frac{1}{2}$  whorls. It will be figured in the present volume of the Manual of Conchology.

Another species of unusual interest is a fossil *Partulina* which was discovered by Dr. Cooke several years ago in a superficial road cutting at the junction of Manoa road with the upper road, back of Rocky Hill, which terminates the western ridge of Manoa valley.

Only one *Partulina* has been known in Oahu hitherto, that being *P. dubia* (Newc.). The present form, which I will call *Partulina montagui* n. sp., is not related to *dubia*, but to such Molokaian species as *P. dwightii* Newc. I regard these two *Partulinas* and the few Oahuan species of *Laminella* as stragglers from the Molokai-Lanai-Maui evolution-center, which reached Oahu before the subsidence of a ridge which I believe formerly connected the islands.

*P. montagui* cannot have been extinct for any great length of time, as the specimens occur in the humus, only buried a few inches below the turf. Probably the forest disappeared from where they are found not more than seventy-five to a hundred years ago. It must have been extinct in the early fifties, or it would surely have been found by Newcomb, Gulick or Emerson.

The shell is sinistral, perforate, ovate-conic, with acuminate spire, thick and solid, sculptured with close, irregular wrinkles, the last whorl malleated; whorls  $7\frac{1}{2}$ , the upper ones nearly flat, the rest convex; suture superficial. Outer and basal margins of the peristome expanded, thick, heavily thickened within; columellar margin thick; columellar fold thick and moderately prominent.

Length 25, diam. 14 mm. (108181 A. N. S. P.).

Length 24.7, diam. 12.5 mm. (111 coll. Irwin Spalding).

Length 26.9, diam. 13.1 mm. (33581 B. P. Bishop Mus.).

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#### THE UNIONE FAUNA OF THE GREAT LAKES.

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BY BRYANT WALKER, SC. D.

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(Continued from page 34.)

Now, according to the geologists, some time about the beginning of the Cretaceous Period there was a great sinking of the land in the Gulf region. It extended from central Texas east to the middle of Alabama, and in a triangular shape north to southern Illinois. It